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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,778	02/20/2002	Yoshinobu Higuchi	1450.1015	5137

21171 7590 09/08/2004

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EXAMINER

PEUGH, BRIAN R

ART UNIT	PAPER NUMBER
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2187

DATE MAILED: 09/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/077,778	Applicant(s) HIGUCHI ET AL.	
	Examiner Brian R. Peugh	Art Unit 2187	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 26-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-37 is/are allowed.
- 6) ☒ Claim(s) 1-10, 15 and 38 is/are rejected.
- 7) ☒ Claim(s) 11-14, 16 and 17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

Applicant's election without traverse of claims 1-17 and 26-38 in the reply filed on May 27, 2004 is acknowledged. Accordingly, claims 18-25 have been cancelled.

Claim Objections

Claim 38 is objected to because of the following informalities:

Claim 38 recites "... a plurality of external terminals which can be connected to the outside...". Although the claim fails to recite whether the "plurality of external terminals" are in fact connected to the outside of what appears to be the controller, the Examiner believes he is able to discern the intended claim limitations. The Applicant is encouraged to amend the claim in order to recite that the external terminals are in fact connected to the outside, as well as including a phrase such as --of said controller— after "outside", in order to provide proper antecedent basis for the claim limitations.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-6 and 38 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, claim 1 recites enabling "a pseudo access as if said volatile memory were externally directly accessed in accordance with an instruction through an external bus when the data transfer is not performed" in lines 7-10. The Specification merely recites this phrase on page 8, lines 5-8 & 17-19, page 15, lines 12-15, and page 37, lines 9-11 without further explanation or detail. It is unclear to the Examiner as to whether this "pseudo access" is in fact an actual memory access or a simulated memory access. Also, it is unclear to the Examiner as to what system or component would initiate a pseudo access and require that data transfer between the volatile memory and nonvolatile memory not currently be performing. The phrase "pseudo access" is not a common term in the art, and the Examiner has been unable to discern a proper interpretation of the phrase in order to perform a proper search for the related claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 7-10 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Williams et al. (US#6,401,168).

Regarding claim 7, Williams et al. teaches **a memory device comprising a nonvolatile memory capable of storing data** (col. 4, lines 28-30), **a volatile memory capable of being random-accessed** (col. 4, lines 38-40), **and a controller [controller circuit (10)] capable of starting writing a plurality of data units in said volatile memory or said nonvolatile memory** (abs, lines 10-12; col. 4, lines 24-26) **before said plurality of data units have been completely read out from said nonvolatile memory or said volatile memory data transfer between said nonvolatile memory and said volatile memory** (abs., lines 13-20; col. 6, lines 20-32).

Regarding claim 8, Williams et al. teaches **said controller can start writing a plurality of data in said volatile memory before said plurality data units have been completely read out from said nonvolatile memory in data transfer from said nonvolatile memory to said volatile memory** (col. 7, lines 51-53 & 58-67; col. 8, lines 1-2).

Regarding claim 9, Williams et al. teaches **said controller can start writing a plurality data units in said nonvolatile memory before said plurality of data units have been completely read out from said volatile memory data transfer from said volatile memory to said nonvolatile memory** (col. 6, lines 20-32).

Regarding claim 10, Williams et al. teaches **said controller performs error detection and/or correction processing in said data transfer** (col. 5, lines 20-29).

Regarding claim 15, Williams et al. teaches **said controller [10] includes a [FIFO] buffer for buffering data and performs said data transfer through said buffer** (col. 4, lines 55-63).

Allowable Subject Matter

Claims 26-37 are allowed over the prior art.

Claims 11-14, 16, and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art corresponds to related volatile and non-volatile systems incorporating error correction.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian R. Peugh whose telephone number is 703-306-5843. The examiner can normally be reached on Monday-Thursday from 7:00am to 4:30pm. The examiner can also be reached on alternate Friday's from 7:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks, can be reached on (703) 308-1756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

Art Unit: 2187

you have questions on access to the Private PAIR system, contact the Electronic
Business Center (EBC) at 866-217-9197 (toll-free).

September 1, 2004



Brian R. Peugh
Patent Examiner
Art Unit 2187